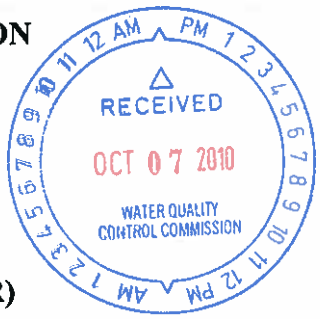
STATE OF NEW MEXICO
BEFORE THE WATER QUALITY CONTROL COMMISSION



In the Matter of:	)	
PROPOSED AMENDMENT TO 20.6.2 NMAC (Dairy Rule)	)	**No. WQCC 09-13(R)**
New Mexico Environment Department, Petitioner.	)	

HEARING OFFICER'S REPORT

COMES NOW, Steve Glass, duly designated Hearing Officer, on behalf of the New Mexico Water Quality Control Commission ("Commission") and hereby submits this Report pursuant to Section 104(B)(4) of the Commission's Rulemaking Guidelines for the purpose of assisting the Commission in its deliberation in this proceeding.

As a preliminary matter, this Report is designed to address areas of disagreement between the various parties which have participated in this proceeding. The Hearing Officer notes that there are substantial areas of agreement between the parties. Therefore, the Hearing Officer recommends accepting the proposed findings of the New Mexico Environment Department ("NMED") Statement of Reasons which are uncontested. The Hearing Officer hereby recommends the following:

FINDINGS OF FACT

Section 20.6.2.3201 Purpose.

1. This Section is uncontested.

Section 20.6.2.3202 Definitions.

2. DIGCE has requested the Commission adopt the Definitions section as proposed by NMED in its Rebuttal Attachment 2. The Hearing Officer notes that the Definitions in NMED's Final Proposed Rule are the same as in NMED Rebuttal Attachment 2 with the exception of "impoundment" and "wastewater."

3. In 20.6.2.3202(B)(18) in the definition of "Impoundment," NMED proposes to add the sentence, "A wastewater or stormwater transfer sump is not an impoundment." This clarification was proposed by NMED based on concerns expressed at hearing by DIGCE. *See* Tr. 4, Pp. 872-875. The concern was further addressed by the testimony of Mr. Schuman in response to questions by Commissioner Jones that a sump would not be a structure designed and used for storage or disposal of wastewater. Tr. 1643-1646. The Hearing officer believes this clarification language should be accepted.

4. In 20.6.2.3202(B)(29) for the definition of "Wastewater" NMED proposes to delete the phrase "except overflow from the drinking water system and stormwater" in the first sentence, and add the sentence, "Wastewater does not include overflow from the drinking water system or stormwater unless overflow or stormwater that is collected is comingled with wastewater, or it comes into contact with water contaminants as a result of being directly or indirectly used in facility operations." NMED proposed this language change to clarify the Department's intention that stormwater that is re-used and is used in the wastewater stream would be consider wastewater. Tr. 3, Pp. 554-557.

Section 20.6.2.3203 Requirements For Discharging From Dairy Facilities.

5. This Section is uncontested.

Section 20.6.2.3204 Fees.

6. Section 3204 addresses the permit application fees for dairy facilities. DIGCE opposes the adoption of this Section on the basis that the Commission is not required to adopt separate fee rules for dairies because fees are not a measure to prevent ground water contamination or a monitoring measure. DIGCE also asserts that there are not any significant differences in dairy facilities versus other facilities that would justify different fee rules, particularly rules that require payment of half of the application fee before permit approval, which is contrary to the existing fee rule. The Hearing Officer does not agree with the DIGCE's objections and notes that pursuant to NMSA 1978, Section 74-6-4(K) the Commission may adopt regulations specifically for the dairy industry. The Hearing Officer also notes that permit fees are reasonably related to the prevention of water pollution and monitoring as any pollution prevention and monitoring program requires funds to operate. In addition, the Hearing Officer finds NMED's assertion that the provision is necessary so that the Department can receive fee revenue at the same time the Department is investing staff resources to review and process the application persuasive. The Hearing Officer also notes that NMED testified that this approach is consistent with existing WQCC regulation Subsection B of 20.6.2.3114 NMAC which requires that half of the permit fee be paid even if an application is withdrawn or denied.

Section 20.6.2.3205 General Application Requirements For All Dairy Facilities.

7. Section 20.6.2.3205 sets forth the general requirements for applications for discharge permits for all dairy facilities, including those that have been permitted but have not

been constructed or operated. The section serves as a "roadmap" for the application process and specifies other provisions of the rule that apply to permittees and applicants. Written Testimony of William C. Olson, NMED NOI Attachment 8, p. 6.

8. DIGCE has recommended adopting this Section as proposed in the Department's June 3, 2010 changes. The Hearing Officer notes that NMED's Final Proposed Rule comports with the June 3, 2010 changes.

9. DIGCE encourages the Department to provide draft forms for informal public review and comment. In its Exhibit 8, DIGCE proposed language requiring the Department to engage in a public comment process similar to that used with a rulemaking procedure prior to adopting forms. However, DIGCE indicates that its concerns have been satisfied by the Departments testimony that form can be taken before the Commission for review. *See* Tr. 772. The Hearing Officer agrees that public participation should be encouraged; however, the forms are the Department's and the Department should be free to craft the forms to its needs. There is no need to set forth such a requirement in this rule.

10. The Coalition has proposed that a closure plan and financial assurances should be submitted as part of an original permit application. The Coalition points to the testimony of Brian Shields as support for its proposal. However, the Hearing Officer notes that Shields's direct testimony (p. 2) and the transcript do not provide substantial evidence for this contention. The statements in the transcript are limited to Mr. Shields' beliefs. Therefore, the Hearing Officer recommends rejection of the Coalition's proposal.

11. Subsection E of Section 3205 applies to applicants for a new discharge permit and specifies that the applicant must certify that it meets the setback requirements proposed in Section 3216 of the dairy rule. The Coalition proposes setbacks of one (1) mile. The Coalition

points to its Exhibit C-2 as support for its proposal. The Hearing Officer notes that NMED proposes 200 to 300 feet.

12. Subsection H of Section 3205 states that the Department may impose additional conditions on a discharge permit pursuant to Section 74-6-5 NMSA 1978. It also provides that the Department shall include a written explanation for any additional conditions, and allow comments in accordance with 20.6.2.3108 NMAC. It also allows for a hearing to be requested pursuant to 20.6.2.3215 NMAC. The amended Water Quality Act, at Subsection D of Section 74-6-5, NMSA 1978 (NMED Exhibit 3205-3), includes a provision authorizing the Department to include additional permit conditions in a discharge permit not otherwise specified in rules for the dairy industry. This subsection establishes the procedures to implement and comply with the requirements of Subsection D of Section 74-6-5, NMSA 1978. DIGCE had requested language to clarify that the Department has the burden of proof regarding additional permit conditions not specified in the rules. However, DIGCE believes that Section 74-6-5(D) adequately describes the Department's burden of proof. Therefore, given DIGCE believes it is adequately protected by the statute, the Hearing Officer recommends adoption of Subsection H as proposed in NMED's final rule.

13. Subsection I of Section 3205 states that the Secretary of the Department shall approve a discharge permit provided that the requirements of the dairy rule are met, and the provisions of 20.6.2.3109 are met, with the exception of Subsection C of that section. Subsection C of 20.6.2.3109 sets forth the requirements that an applicant for a non-dairy discharge plan must meet to prevent water pollution and monitor water quality, but these general requirements are superseded by this prescriptive dairy rule. Under Subsection I, if an application complies with the dairy rule it is approvable subject to conditions contained in the dairy rule and

additional conditions required by the Department. The Coalition argues that 3205(I)(2) must provide NMED with sufficient regulatory flexibility to adequately protect state water quality in an emergency. The exclusion of 3109(C) NMAC from the Department's proposed rule eliminates "hazard to public health and undue risk to property". The Hearing Officer agrees with the Coalition and recommends adding the language regarding "undue hazard" from 3109(C).

Section 20.6.2.3206 Application Requirements For A New Discharge Permit.

14. DIGCE consents to the adoption of Subsections A through F, H, J, and M through Q as proposed in NMED's Rebuttal Attachment 2 (March 8). The Hearing Officer notes that they appear to be similar with the exception of Subsection C.

15. Subsection A of Section 3206 states that an application for a new discharge permit must include the information described in the section. The Coalition has proposed that a closure plan and financial assurances should be submitted as part of an original permit application. The Coalition points to the testimony of Brian Shields as support for its proposal. However, the Hearing Officer notes that Shields's direct testimony (p. 2) and the transcript do not provide substantial evidence for this contention. The statements in the transcript are limited to Mr. Shields' beliefs. Therefore, the Hearing Officer recommends rejection of the Coalition's proposal.

16. Subsection C of Section 3206 sets forth the ownership information for the dairy facility, including any property agreements giving the dairy facility the right to use the land of others for land application purposes. In its Final Proposed Rule, the Department added partnerships as an entity that should disclose the ownership interest. This was in response to questions by Commissioner Jones, who pointed out that partnership interests weren't necessarily

covered by the existing language, and should be added. Tr. 7, Pp. 1478-1482. This change is reasonable and should be accepted.

17. Additionally, in Subsection C of Section 3206 of its initial version of the rule filed on March 8, 2010, the Department included a requirement that the applicant provide the names of the business entity's directors, officers, members or partners. NMED NOI Attachment 8, 20.6.2.3206.C(1)(b). DIGCE opposed this language in its Exhibit 8 comments. Subsequently, the Department removed this requirement in its March 29 rebuttal version of the rule (NMED Rebuttal Attachment 2), because it believed this information would be available at the Public Regulation Commission. However, based upon cross-examination by the Coalition, NMED now believes that the language should remain in the rule, because officers and directors may change without notification to the Public Regulation Commission. Tr. 3, Pp. 520-522. DIGCE disagrees. The Commission in consultation with counsel will clarify this issue.

18. Subsection D of Section 3206 requires the applicant to certify that the setback requirements of Section 3216 NMAC are met. The Coalition has recommended setbacks of one (1) mile.

19. Subsection G of 20.6.2.3206 states that an applicant must include the pre-discharge total dissolved solids concentration from analytical results of ground water obtained from the on-site test boring done prior to discharge. The Department's Final Proposed Rule adds the phrase, "if applicable, or from the nearest well within a one-mile radius of the dairy facility" to allow an applicant to provide samples from such a well if a sample from a test boring cannot be taken. This language is necessary because the requirement for a test boring was changed in the final version of Section 3220(Y) (formerly Z) so that borings are now only required to a depth of 75 feet, which may not intersect with ground water. The need for this change was

discussed by Mr. Olson in response to questions by Commissioner Jones. Tr. 7, Pp. 1482-1483. The one-mile radius is consistent with Section 3220(Y)(1). Another change to Section 3206 resulting from the change to Section 322(Y) so that borings are only required to a depth of 75 feet is the deletion of the words "measurements from the one site specific test boring" in Subsection L(1). These changes are for the purpose of making these subsections consistent with Section 3220(Y).

20. DIGCE recommends replacing the sentence referencing 3220(Z) (now (Y)) with "from an onsite boring or well in or near the production area" so that an on-site test boring is not always required. The Hearing Office notes that the NMED changes above appear to resolve DIGCE's complaint.

21. DIGCE objects to the inclusion in Subsection I of sulfur because there is no groundwater standard and no supporting testimony. The Hearing Officer agrees and recommends striking "total sulfur" because there is no groundwater standard for total sulfur in 20.6.2.3103 NMAC. NMED Statement of Reasons 282 provides persuasive evidence for requiring sulfate monitoring, for which there is a groundwater standard. However, NMED's final draft rule does not correlate. Therefore, the Hearing Officer recommends replacing "total sulfur" with "sulfate".

22. DIGCE recommends changes to Subsection K from DIGCE Ex 8. Specifically, DIGCE recommends replacing "metering" with "flow measuring" and adding a staff gauge option. The Hearing Officer recommends replacing "flow metering" with "flow measuring" for consistency with changes to 3207(I)(2). "Flow meter" terminology in 3207(I)(3) does not preclude the use of other flow measuring devices. However, DIGCE provided no credible evidence that staff gauges measure flow. The Hearing Officer notes that DIGCE Exhibit 71

establishes that certain flow meter types are accurate and reliable in a dairy environment, but require larger investment and power source.

23. Subsection L(1) of Section 3206 requires an applicant to indicate the depth to most shallow ground water in its application. In its Final Proposed Rule, the Department struck the requirement that the application include "measurements from the one site specific test boring" to be consistent with the change to Section 3220(Y). Borings are now only required to a depth of 75 feet as discussed in relation to Subsection G, above. DIGCE recommends the insertion of "or wells referenced" after "boring" to conform to changes proposed for 3220(Z) (now 3220(Y)). The Hearing Officer notes that with NMED's proposed changes there is no occurrence of "boring" in 3206(L) and that NMED's changes appear to address DIGCE's objections.

24. DIGCE recommends deletion of "between the manure solids separator(s) and wastewater impoundment(s) in Subsection R. DIGCE claims that it is redundant. The Hearing Officer notes that even if redundant, the requirement is sound and sees no reason for its deletion.

Section 20.6.2.3207 Application Requirements For Discharge Permit Renewal or Modification.

25. Subsection A of Section 3207 sets forth the requirement that an application for a renewed or modified discharge permit shall include the information described in the section.

26. The Coalition has recommended that a closure plan and financial assurances as part of an original permit application. As discussed previously, the Hearing Officer does not believe that Mr. Shields's testimony and the transcript provide substantial evidence for this proposal. Therefore, the Hearing Officer recommends rejection of the Coalition's proposal.

27. DIGCE recommends adoption of Subsections A through H and K through O as presented in NMED Rebuttal Attachment 2. The Hearing Officer notes that NMED has proposed changes to Subsections C, D, F, J, and L of Rebuttal Attachment 2.

28. Subsection C of the Department's Final Proposed Rule was changed to add partnerships as an entity that should disclose the ownership interest. This was in response to questions by Commissioner Jones, who pointed out that partnership interests weren't necessarily covered by the existing language, and should be added. Tr. 7, Pp. 1478-1482. This change is reasonable and should be accepted.

29. Additionally, in this subsection of its initial version of the rule filed on March 8, 2010, the Department included a requirement that the applicant for renewal or modification provide the names of the business entity's directors, officers, members or partners. NMED NOI Attachment 8, 20.6.2.3206.C(1)(b). DIGCE opposed this language in its Exhibit 8 comments. Subsequently, the Department removed this requirement in its March 29 rebuttal version of the rule (NMED Rebuttal Attachment 2), because it believed this information would be available at the Public Regulation Commission. However, based upon cross-examination by the Coalition, NMED now believes that the language should remain in the rule, because officers and directors may change without notification to the Public Regulation Commission. Tr. 3, Pp. 520-522.

30. DIGCE objected to the original inclusion of this language. *See* DIGCE Ex. 8. According to DIGCE, a requirement to identify individual directors, officers, members, or shareholders in a corporation is not consistent with New Mexico corporate law. Information on directors and officers can be obtained from the Public Regulations Commission if they are needed for some purpose. This information changes over time, and since the liability rests with

the corporation itself, there is no justification for requiring submission of this information. The Commission in consultation with counsel should seek to clarify this issue.

31. Subsection D was changed by NMED to add a requirement for the discharge permit identification number as designated in the most recent permit for the facility. This change is based on a suggestion by Commissioner Jones, and should be accepted. Tr. 3, p. 594.

32. Subsection E deals with Public Notice Preparation. The Coalition has proposed setback requirements be at least one mile between the dairy and the nearest occupied residence.

33. Subsection F sets forth the requirement for pre-discharge total dissolved solids concentration in ground water. In its Final Proposed Rule, the Department adds the phrase "nearest well within a one-mile radius of the dairy facility" and deletes "nearby off-site supply well." As with Subsection G of Section 3206, this language is necessary because the requirement for a test boring was changed in Section 3220(Y) (formerly Z) so that borings are now only required to a depth of 75 feet. The one-mile radius is consistent with Section 3220(Y)(1). The need for this change was discussed by Mr. Olson in response to questions by Commissioner Jones. Tr. 7, Pp. 1482-1483.

34. Subsection I requires the application to describe the flow metering system to be used at the dairy. Cross-references were changed in the Department's Final Proposed Rule to be consistent with changed subsection lettering in the proposed rule. DIGCE recommends incorporating its proposed changes to 3207(I) contained in DIGCE Ex 8. These changes include replacing "metering" with "flow measuring" and adding a staff gauge option. The Hearing Officer concurs with most of these changes. Replacing "flow metering" with "flow measuring" is consistent with 3207(I)(2). The "flow meter" terminology in 3207(I)(3) does not preclude the use of other flow measuring devices. However, DIGCE provided no evidence that staff gauges

measure flow. The Hearing Officer notes that DIGCE Exhibit 71 establishes that certain flow meter types are accurate and reliable in dairy environment, but require larger investment and power source.

35. Subsection J requires the application to include depth to most shallow ground water and indicate ground water flow direction beneath the dairy facility on a ground water elevation contour map. The Department's Final Proposed Rule contains a change to make this subsection consistent with the change to Section 3220(Y). The phrase, "measurements from the one site-specific test boring" is deleted because the test-boring measurements may not be available.

36. DIGCE proposes to adopt Subsection J to conform to the revisions to 3220(Z) (now 3220(Y)). In Paragraph 1, DIGCE wants to insert "or wells referenced" after "boring". The Hearing Officer notes that with NMED's proposed changes in its Final Rule there is no occurrence of "boring" in 3207(J). NMED's changes appear to resolve DIGCE's complaint and should be accepted.

37. Subsection L requires an application to include soil survey maps and lithologic logs. This requirement in the Department's Final Proposed Rule contains an addition of the terms "if available" and "if applicable" to conform this paragraph to the change to Section 3220(Y) so that test borings are now only required to a depth of 75 feet.

38. Subsection P requires dairies which are planning on using land application areas to include specific information about those areas. DIGCE has recommended adopting Subsection P with the changes proposed in DIGCE Ex. 8 for consistency purposes. Specifically, DIGCE seeks the deletion of "between the manure solids separator(s) and wastewater impoundment(s)". This change was rejected earlier by the Hearing Officer and is not needed.

Section 20.6.2.3208 Application Requirements For A Discharge Permit For Closure.

39. This Section is uncontested.

Section 20.6.2.3209 Additional Public Notice Requirements for Applications for A New Discharge Permit.

40. Section 3209 creates a public notice requirement in addition to the Commission's requirements in 20.6.2.3108.B NMAC that applies only to a new discharge permit for a future dairy facility whose application for a new permit is received by the Department after the effective date of the dairy rule. This requirement would not apply to existing dairies. For these types of new permit applications, the radial distance for which the applicant would be required to provide notice would be expanded from the current distance of 1/3 of a mile to a distance of one mile. According to NMED, this expanded distance is necessary as data available to the Department has shown that ground water contamination at existing dairy facilities can migrate to distances of greater than 1/3 of a mile as discussed in the testimony of Department witness Bart Faris (see NMED NOI Attachment 3). The potential for ground water impacts at a distance from a dairy facility makes it necessary to have a greater public notice distance so that adjacent landowners that could be potentially impacted have an opportunity to participate in the permitting process. This larger notice distance is also consistent with the notice requirements in the WQCC regulations for "Abatement and Prevention of Water Pollution" in 20.6.2.4108.B(4) NMAC. Written Testimony of William C. Olson, NMED NOI Attachment 8, Pp. 21-22. Section 3209 of the Department's Final Proposed Rule is reasonable and should be adopted.

41. DIGCE opposes the adoption of 3209. According to DIGCE, the Commission is not required to adopt additional public notice requirements for dairies because notice is not a

measure to prevent ground water contamination or a monitoring measure. Also, DIGCE argues that there are no differences between dairies and other dischargers to justify different notice requirements. The Hearing Officer does not agree with the DIGCE's objections and notes that pursuant to NMSA 1978, Section 74-6-4(K) the Commission may adopt regulations specifically for the dairy industry which sets dairies apart from other dischargers. The Hearing Officer also notes that notice is reasonably related to the WQCC's mission of protecting the public. *See* NMSA 1978, Section 74-6-4(D) ("The standards shall at a minimum protect the public health or welfare ... "). In addition, arguments that dairies are no different than other industries are discounted by the specific statutory requirement calling for dairy regulations.

42. The Coalition argues that public notice should include map of facility. The Hearing Officer believes this is a reasonable request.

Section 20.6.2.3215 Procedures For Requesting Public Hearings On Permitting Actions For Dairy Facilities.

43. The amended WQA at Subsection D of Section 74-6-5, NMSA 1978, states that "[a]fter regulations have been adopted for a particular industry, permits for facilities in that industry shall be subject to conditions contained in the regulations." NMED argues that Section 3215 is necessary to provide the requirements regarding the submittal and evaluation of hearing requests consistent with the amended WQA and pursuant to Section 20.6.2.3108.K NMAC. Under the amended WQA a hearing may only be granted for the review of additional conditions placed on a discharge permit that are not specified by rule. This section will streamline the issuance of discharge permits for dairies and minimize the investment of time and cost incurred by the Department by clarifying that hearings will only be held to consider the specific additional discharge permit requirements being disputed. Hearing requests to dispute conditions contained

in the dairy rule must be denied because the Secretary does not have the authority to alter requirements of the dairy rule. Written Testimony of William C. Olson, NMED NOI Attachment 8, p. 22.

44. DIGCE opposes the adoption of Section 3215 for reasons given in DIGCE Exhibit 8. DIGCE argues that there are no differences between dairies and other dischargers that justify different procedures for public hearings. In addition, it claims Subsection B is not sufficiently clear on what permit conditions are specified in the rules to require denial of a request for hearing. The Hearing Officer reiterates that the statute allows the Commission to promulgate dairy specific regulations.

Section 20.6.2.3216 Setback Requirements For Dairy Facilities Applying For A new Discharge Permit.

45. This section creates setback requirements that apply only to a new application for a permit for a future dairy facility whose application for a new discharge permit is received by the Department after the effective date of the dairy rule. This requirement would not apply to existing dairies. Written Testimony of William C. Olson, NMED NOI Attachment 8, p. 24.

46. DIGCE proposes to adopt Section 20.6.2.3216 as proposed in NMED Rebuttal Attachment 2 with the exception of Subsections D(2) [now E(2)], E(1)(a) [now F(1)(a)] and F [now G]. For those Subsections, it proposes adopting the changes identified in DIGCE Ex. 8.

47. Section 20.6.2.3216 of the Department's Final Proposed Rule has added a Subsection C and been re-worded to clarify the intent of the section that if the facility meets all the setback distances at the time of its initial application, then the facility does not become out of compliance if a neighbor puts in a domestic well within the setback distance at a later time. On cross-examination, Mr. Olson testified that this is the intent. Tr. 3, p. 511.

48. The Coalition proposes that setback requirements should be at least one (1) mile between the dairy and the nearest occupied residence. DIGCE opposes the adoption of these changes for the reasons stated in its rebuttal testimony particularly that it is not fair to retroactively impose setback conditions on existing facilities that already have obtained permits and invested in plans, designs, land and other components of a dairy. The Hearing Officer finds that the expertise and experience of NMED with other regulations is persuasive on this issue and therefore recommends not accepting the Coalition's proposal. *See* Olson Direct, Ex. 8, p. 24.

49. DIGCE proposes to amend Subsection D(2) [now E(2)] to delete the phrase "and are located on the dairy facility."

50. DIGCE proposes to adopt Subsection E [Now F] with the changes proposed in DIGCE Ex. 8. Specifically, DIGCE wants to add the language "established unless berms or other control features are constructed" to Subsection (1)(a). DIGCE argues that this will provide a waiver for setbacks if berms or filters are installed, consistent with EPA CAFO rule (DIGCE Ex. 60-62). The Hearing Officer notes that Section 3219(F) addresses surface water protection, regulation of which is limited to the provisions of 20.2.2.2101 (prohibiting discharges of effluents with excessive concentrations of 5 parameters only). The Hearing Officer also notes that surface water setback provisions are needed for smaller dairies not covered by the federal CAFO rule. Also, setback requirements must be based on groundwater protection. State regulations for groundwater protection do not have to correlate with the federal CAFO rules. Waivers for berms and dikes suggested by DIGCE are improper because surface berms and dikes do not improve groundwater protection.

51. DIGCE proposes to adopt Subsection F (would be G if adopted) from DIGCE Ex. 8. This Section is not included in the Department's Final Rule. DIGCE proposes to add the

following: "... an applicant may submit a proposal for implementation of engineered features, buffers, or physical conditions such as topography, in lieu of the setback limits, along with a demonstration that the proposal would provide equivalent or better protection than would be achieved by the setback limits specified in this section. The department may issue a permit requiring implementation of the proposal in lieu of the setback limit if it finds that the proposal would provide equivalent or better protection of water quality than would be achieved by the setback limits." DIGCE argues that this added subsection provides flexibility for consideration of alternative measures to provide the same protection as setback distances, which could be approved in NMEDs discretion. This is consistent with the approach in the EPA CAFO requirements. (DIGCE Ex 8 p. 30). The Hearing Officer notes that DIGCE's suggestion that NMED be able to consider alternative approaches to simple setbacks is not unreasonable, but the whole issue of whether these rules can include conditions to protect surface water remains.

Section 20.6.2.3217 Engineering and Surveying Requirements for All Dairy Facilities.

52. Section 3217 sets forth the engineering and surveying requirements that a dairy must meet to obtain a permit. The requirements apply to impoundments, manure solids separators, grading and drainage, flow metering and other aspects of a dairy that require engineering or surveying.

53. DIGCE recommends adoption of 3217(A) through (C) as proposed in NMED's June 3, 2010 submission with the exception of Subsection (C)(7).

54. Paragraph (7) of Subsection C of Section 3217 requires an applicant who is proposing or required to install a flow meter to submit documentation to support the selection of

the proposed device along with construction plans and specifications detailing the installation or construction of the device.

55. DIGCE recommends incorporate changes to 3217(C)(7) from DIGCE Ex 8. These changes include adding "or volume measurement device" after "meter(s)". The Hearing Officer recommends adding "or other Department-approved flow measuring device" instead of DIGCE's proposed language.

56. DIGCE recommends the adoption of Subsection D as proposed in NMED's June 3, 2010 submittal with the exception of Paragraphs 4, 6, and 7.

57. Subsection D of Section 3217 sets forth engineering design requirements for impoundments, stormwater conveyance channels, and impoundment liners. The Department's initial version of this section was changed substantially between its March 8 and its June 9 version based on concerns expressed by DIGCE and Commissioner Jones. In particular, the June 9 version and the Final Proposed Rule clarify that the Department does not determine the capacity requirements for stormwater impoundments, and made changes to the provisions related to liner construction to meet the concerns of DIGCE and Commissioner Jones. Tr. 981-982.

58. Paragraph (4) of Subsection D of Section 3217 sets forth the design and construction requirements for impoundments that are required to be synthetically lined. DIGCE recommends replacing 95% in Paragraph (4)(c) with 90%, based on NMED's engineer's recommendation. *See* Tr. 1005-1007. The Hearing Officer agrees.

59. Paragraph (6) of Subsection D of Section 3217 sets forth the requirement that an applicant proposing or required to construct a new or to improve an existing wastewater or combination wastewater/stormwater impoundment must line the impoundment with a synthetic liner. Under Subparagraph (a) where the depth to ground water is 50 feet or less, then the dairy

facility must use a double synthetic liner. Under Subparagraph (b) where the depth to ground water is more than 50 feet, the dairy facility may use a single synthetic liner. This paragraph also requires that the synthetic liner be 60-mil HDPE or other material having equivalent characteristics with regard to permeability, resistance to degradation by ultraviolet light, compatibility with the liquids to be impounded, tensile strength and tear and puncture resistance. Department's Final Proposed Rule, 20.6.2.3217.D(6).

60. DIGCE recommends substituting language from DIGCE Ex. 8 for 3217(D)(6)(a). First, it wants to replace the language "Where the vertical distance ... monitoring well(s) with "if a synthetic liner is selected." DIGCE also wants to replace the 50 foot groundwater depth trigger with 100 foot. The effect is to eliminate any requirement for a double liner, and limit single liner thickness to 40 mils. Mr. Olson stated that double liners offer the best protection available, but did not present scientific evidence that double liners perform better than single liners (NMED NOI Ex. 8 p.40, NMED Closing p.18, Tr. 1425). NMED did not present scientific studies of groundwater contamination from clay-lined lagoons (Tr. 1073). NMED did not present scientific evidence comparing 40 mil and 60 mil liner performance (Tr. 1010), but did provide citations to one other NMED design specification that require 60-mil liners (NMED Rebuttal Attachment 3, p. 41, NMED NOI Ex. 3217-10). Commission Jones's cross established that DIGCE provided no scientific justification for 40 mil over 60 mil (Tr. 2008 p.24; Tr. 2397 p.1). The Hearing Officer notes that DIGCE's proposed "if a liner is selected" language is ambiguous, providing no guidance about conditions or authority for selection. One possible approach for the Commission would be to require single 60-mil liners with leak detection systems for groundwater less than 50 feet deep [3217(D)(6)(a)] and to require single 40-mil liners for groundwater greater than 50 feet deep [3217(D)(6)(b)].

61. Paragraph (7) of Subsection D sets forth the requirement that an applicant proposing or required to improve an existing stormwater impoundment must line the impoundment with a synthetic liner that is at least 60-mil HDPE or equivalent. The synthetic lining requirement is limited to circumstances where improvements are required because ground water contamination results from an existing impoundment pursuant to the contingency in Subsection B of 20.6.2.3227. Written Testimony of William C. Olson, NMED Rebuttal Attachment 3, p. 41. DIGCE proposes adoption of Subsection (7) as proposed in its Exhibit 8 which deletes reference to 60-mil HDPE. NMED's Final Rule and DIGCE Ex. 8 appear to be substantially different. How this Section is adopted will depend on what the Commission finds with regard to liners.

Section 20.6.2.3220 Operational Requirements For All Dairy Facilities.

62. Section 3220 requires notice to the Department prior to the commencement, cessation, or recommencement of wastewater discharge, or the placement, removal, or reintroduction of livestock.

63. DIGCE has requested that 3220 be redrafted to identify provisions as permit conditions. The Hearing Officer finds this suggestion reasonable and recommends inserting "AND CONDITIONS" after "OPERATIONAL REQUIREMENTS" in the title of this Section.

64. Subsection B of 3220 requires that impoundments at dairy facilities meet the liner, design and construction requirements of Subsection D of 20.2.5.3217 (synthetic liner requirements) unless sampling shows that there is no ground water contamination resulting from the impoundment. DIGCE has recommended adopting this Subsection but striking the sentence "For the purpose of this subsection ... within two days of each other." DIGCE argues that there is no

relationship between the two day requirement and groundwater travel. The Hearing Officer states that if the Commission finds that the testimony supports DIGCE's contention, then DIGCE's change should stand.

65. Subsection D of 3220 requires an applicant or permittee to measure the thickness of settled solids in impoundments, and sets forth the procedures that must be used for taking the measurements.

66. DIGCE recommends adopting 3220(D) from DIGCE Ex 8. In particular, for methods identified as ways to measure thickness of settled solids, DIGCE proposes to add the following subsection - "For impoundments with staff gages or equivalent measuring gauges, the permittee shall pump the fluid level down to the top of the settled solids surface and record the gage height or other measurement device height to the nearest 0.5 foot and estimate the total volume of settled solids by mutiplying the average thickness of the solids layer by the area of the top of the settled solids layer. The area shall be calculated using the impoundment dimensions corresponding to the estimated surface of the settled solids layer." The Hearing Officer believes DIGCE's proposal to be flawed as 3216(D)(4) and (5) are required, even if alternative procedure is adopted. Also, the Hearing Officer questions why water should be pumped and discharged when sludge depth can be measured with a device.

67. Subsection E of 3220 requires that construction of new impoundments or improvements to existing impoundments be performed in accordance with the construction and design plans submitted to the Department. Paragraphs (1) and (2) set forth the timing required for completion of impoundments.

68. DIGCE proposes adopting 3220(E) as proposed in DIGCE Ex 8. Specifically, it wants to add combination impoundments to 3220(E)(1)(a) and to delete 3220(E)(1)(b). The

Hearing Officer notes that NMED deleted 3220(E)(1)(c) to avoid regulating stormwater pond impoundments. The Hearing Officer believes that DIGCE's Statement of Reasons nor Exhibit 8 provides any reasoning for combining 3220(E)(1)(a) and (b).

69. Subsection F of Section 3220 requires dairies to have manure solids separators. Subsection (1) requires the manure solids separator to be constructed according to the submitted construction and design plans, and requires submission of a completion confirmation. Subsection (2) sets forth a timeline for construction of new solids separators at dairies that do not currently have one.

70. DIGCE recommends adopting the language for 3220(F) from DIGCE Ex 8. Specifically it wants a waiver option for existing dairies. It proposed to add to Paragraph (2) the following: "The department may waive the requirement for a solids separator for an existing dairy upon a showing that the dairy has sufficient impoundment capacity to contain wastewater without solids removal for at least five years, considering any plan for solids removal, and that the configuration of the existing dairy makes installation of a manure solids separator infeasible or the cost of installing a solids separator would affect the dairy's ability to remain in business." DIGCE has provided no reference to the record in support of their proposal for a waiver of requirement for solids separator. The Hearing Officer's review of the transcript reveals no evidence in support of DIGCE's proposal. Discussion occurred between Mr. Moellenberg and Mr. Olson about the requirement for existing dairy to seek a waiver if there is insufficient room to install a manure separator. *See* Tr. 1114 et seq.

71. Subsection I of Section 3220 requires a permittee to transfer stormwater that has been collected in an unlined impoundment to the wastewater impoundment or the distribution system for the land application area after a storm event to minimize the potential for movement

to ground water. DIGCE recommends deleting the phrase "and to restore the free capacity required by Subsection D of 20.6.2.3217 NMAC." The Hearing Officer notes that this phrase removed by NMED in its Final Rule.

72. Subsection J of Section 3220 of the Department's initial rule proposal as well as its June 9 version required the dairy to transfer stormwater from its stormwater impoundments after each storm event so as to maintain the free liquid capacity of the stormwater impoundment. This entire subsection was deleted in the Department's Final Proposed Rule to be consistent with the Department's changes to Section 3217 that made clear that the Department will not be regulating stormwater impoundment capacity under CAFO laws and regulations.

73. The Hearing Officer notes that old Subsection J from Rebuttal Attachment 2 has been deleted in NMED's Final Rule. Subsection J of Section 3220 of the Department's initial rule proposal as well as its June 9 version required the dairy to transfer stormwater from its stormwater impoundments after each storm event so as to maintain the free liquid capacity of the stormwater impoundment. This entire subsection was deleted in the Department's Final Proposed Rule to be consistent with the Department's changes to Section 3217 that made clear that the Department will not be regulating stormwater impoundment capacity under CAFO laws and regulations. DIGCE recommends adoption of Subsection J as proposed in Rebuttal Attachment 2.

74. Subsection K (now J) of Section 3220 in the Department's Final Proposed Rule (Flow Meter Installation) requires permittees to use flow meter systems to measure the volume of wastewater discharged at the dairy facility. It also requires that the flow meters be installed according to the submitted plans and specifications, and that installation be confirmed. Department's Final Proposed Rule, 20.6.2.3220.J.

75. DIGCE recommends adopting Subsection K (now J) language from DIGCE Ex. 8 which would allow other approved measuring devices. *See* NMED Closing p.31. NMED provided circumstantial scientific evidence that flow meters work in wastewater environments, without specifics regarding applicability to dairies. NMED Exhibit 3220-5 provides persuasive scientific arguments against the use of staff gauges to measure flow rates. DIGCE provided opinion testimony, but no scientific evidence, that flow meters are inferior to staff gauges for flow measurement at dairies. DIGCE Ex. 71 summarizes research showing that some flow meters work very well for measuring manure pond discharges. DIGCE testimony established that use of flow meters is a best management practice (Testimony of Norman Mullin, Hearing Tr. Vol. 11, P. 2337). Therefore, the Hearing Officer recommends as a possible approach allowing "Department-approved" alternative flow measurement methods/devices for this Section.

76. Subsection M (now L) of Section 3220 requires an applicant to identify the location of flow meters that are installed or proposed to be installed. It is necessary to identify existing and proposed flow meter locations in the application for a discharge permit so that the Department can determine, prior to issuing a draft discharge permit, if the flow meter locations are appropriate to achieve compliance with the dairy rule. Additionally, identification of the flow meters on a site map allows the Department to easily locate the meters during compliance inspections. Written Testimony of William C. Olson, NMED NOI Attachment 8, Pp. 51-52.

77. DIGCE recommends the adoption of 3220(M) as proposed in DIGCE Ex 8. Specifically, it would allow other flow measuring devices. The Hearing Officer is fine with this recommendation as long as the devices are Department-approved.

78. Subsection N (now M) of 3220 requires an applicant with an existing flow meter to document that it is installed and calibrated consistently with the dairy rule. DIGCE seeks to

add language from Ex. 8 allowing other measuring devices. The Hearing Officer does not object as long as the devices are Department-approved.

79. Subsection O (now N) of 3220 requires flow meters to be installed to measure the volume of wastewater discharged from all wastewater sources to the impoundments. DIGCE wants other measuring devices. Hearing Officer does not object as long as the devices are Department approved.

80. Subsection P (now O) of Section 3220 sets forth requirements that dairy facilities perform daily visual inspections of their flow measurement devices. DIGCE recommends the adoption of 3220(P) (now O) from DIGCE Ex 8. DIGCE's changes would allow other measuring devices, and add "as soon as practicable" for failed meter replacement. It would also add a sentence requiring inspection of measuring device including staff gauges before measurement is taken. The Hearing Officer recommends denying the staff gauges portion based upon NMED Ex: 3220-5. The Hearing Officer recommends allowing the added sentences regarding inspection of measuring devices as noted in DIGCE Ex. 8 for 3220(P).

81. Subsection R (now Q) of Section 3220 applies to dairies that have double liners with a leak detection system. According to this subsection, impoundments utilizing a dual liner system with leak detection must be inspected and maintained in order to perform as intended. If leachate accumulates in the leak detection system, it must be returned to the impoundment with an automatic pump to minimize head on the secondary liner. The system must be inspected monthly, and if malfunctions occur, they must be repaired within 30 days. The Department must be notified in 60 days. DIGCE recommends the deletion 3220(R) (now Q) that refers to double-lined systems. The Hearing Officer notes that this Section must be consistent with liner requirements for impoundments in 3217(D)(6)(a) to be decided by the Commission.

82. Subsection V (now U) of Section 3220 states that a permittee must minimize the generation and infiltration of leachate from silage storage areas and prevent ponding within the silage storage areas. DIGCE recommends deleting the second sentence in 3220(V) [now U]. NMED has stated that it is fine with stormwater leachate being directed to a stormwater pond, but objects to ponding of any leachate at the silage storage area. See Tr. 1122. The Hearing Officer recommends possibly inserting "or the stormwater impoundment" after "impervious surface".

83. Subsection Y of Section 3220 sets forth the methods by which an applicant or permittee without a monitoring well may evaluate ground water depth. The Department's initial version of this subsection (Subsection Z) required the applicant to conduct a test boring to ground water. In its June 9 version, in an attempt to reduce costs to dairies for conducting test borings, the Department modified this subsection to provide that an applicant without a monitoring well may establish that the depth to ground water is greater than 50 feet by using well record information from the state engineers office to show that all wells within one mile of the facility indicate a depth of greater than 100 feet. If any wells within a mile of the facility indicate that the depth to ground water is less than 100 feet, the applicant must conduct a test boring to a depth of 75 feet, to establish whether the ground water depth is greater than 50 feet from the bottom of an impoundment. Tr. 5, Pp. 983, 1125. It also requires that lithologic logs from the test boring be provided to the Department, and that the borehole be abandoned and grouted with cement, bentonite or other material approved by the state engineer. This provision requires the determination of depth to ground water and geology (NMED Exhibit 3220-11) beneath a facility if such information does not exist at the time of submittal of a permit application.

84. DIGCE recommends adopting Paragraph 1 but not 2 of 3220(Z) (now Y) of NMED's June 3, 2010 submittal. According to DIGCE paragraph 2 is tied to the need for a more precise depth-to-groundwater requirements. Depth to groundwater is only needed if double liners are adopted. The Hearing Officer finds that if separate liner requirements are adopted at 3217(D)(6) for different groundwater depths, then Subsection (Y)(2) should stay. If liner design does not depend on groundwater depth, then (Y)(2) should be deleted.

Section 20.6.2.3221 Additional Operational Requirements For Dairy Facilities With A Land Application Area.

85. DIGCE recommends adoption of Subsection A as proposed in NMED's June 3, 2010 submittal.

86. Subsection B of Section 3221 prohibits the introduction of irrigation water into any impoundment authorized for the storage of wastewater or stormwater. DIGCE recommends the adoption 3221(B) language from DIGCE Ex 8. DIGCE wants to change the Subsection title from "Prohibition of" to "Limitations on", and allow irrigation water in impoundment as long as it is drained within 48 hours. NMED provided persuasive scientific evidence that adding irrigation water to a wastewater impoundment causes unpredictable effects on nutrient concentrations across the impoundment volume, undermining proper implementation of the nutrient management plan. *See* NMED closing argument p.41.

87. Subsection D of Section 3221 requires an applicant or permittee to submit documentation of irrigation water rights from the office of the State Engineer for all fields within the land application area to the Department with its application. It also provides that land application will not be approved unless adequate water rights are held for irrigation to produce and harvest the crops necessary for the removal of nitrogen for the effective term of the permit.

Written Testimony of William Pearson, NMED NOI Attachment 8, p. 62. DIGCE recommends adopting 3220(D) language from DIGCE Ex 8. DIGCE argues that water rights are needed only while permit is in effect, and "a dairy previously permitted for land application to non-irrigated fields may be permitted to continue to do so as long as no exceedances of ground water standards are evident." The Hearing Officer notes that there is no testimony in the transcript that addresses DIGCE's suggestions for 3221(D). Requiring water rights demonstration only during permit life seems logical. Also, allowing a wastewater disposal practice under an existing permit seems reasonable, although the authorization will likely end when the permit is renewed under the Dairy Rule.

88. Subsection E of Section 3221 states that wastewater shall only be applied to fields within the land application area receiving fresh irrigation water. DIGCE proposes adopting 3221(E) language from DIGCE Ex 8. The language would create an exclusion for facilities grandfathered under 3221(D). The Hearing Officer notes that if DIGCE's changes are adopted for 3221(D), then DIGCE's suggested "grandfathered" language for 3221(E) would be consistent.

89. Subsection F of Section 3221 prohibits combining wastewater with irrigation water in an impoundment. It allows blending in the fresh irrigation water supply lines when the fresh water irrigation line is equipped with a reduced pressure principle backflow prevention assembly. It also provides that wastewater and irrigation water may be blended in a mix-tank for application, or may be applied to the land in separate lines. DIGCE recommends adopting 3221(F) language from DIGCE Ex 8 to allow mixing irrigation water and wastewater in an impoundment. The Hearing Officer believes that based upon NMED's arguments for 3221(A), blending irrigation water and wastewater should remain prohibited.

90. Subsections I and J of Section 3221 require a permittee to install flow meters to measure the volume of wastewater discharged from the wastewater, combination wastewater/stormwater and stormwater impoundments to the land application area. DIGCE recommends adopting 3221(J) language from DIGCE Ex 8 which would allow other measuring devices. NMED provided circumstantial scientific evidence that flow meters work in wastewater environments, without specifics regarding applicability to dairies. *See* NMED Closing p.31. NMED Ex 3220-5 provides persuasive scientific arguments against the use of staff gauges to measure flow rates. DIGCE provided opinion testimony, but no scientific evidence, that flow meters are inferior to staff gauges for flow measurement at dairies. DIGCE Ex. 71 summarizes research showing that some flow meters work very well for measuring manure pond discharges. DIGCE testimony established that use of flow meters is a best management practice (Testimony of Norman Mullin, Hearing Tr. Vol. 11, P. 2337). The Hearing Officer recommends as a possible approach allowing other "Department-approved" flow measurement methods and devices.

91. Subsection K of Section 3221 requires a dairy applying wastewater to land to prepare a Nutrient Management Plan, and to apply the wastewater in compliance with that Nutrient Management Plan. It requires the Nutrient Management Plan to be developed using Natural Resources Conservation Service ("NRCS") templates as adopted by the NRCS New Mexico Field Office, and in accordance with the NRCS practice standard for New Mexico. It further requires that the NMP be developed, signed and dated annually by an individual certified by the American Society of Agronomy as a Certified Crop Advisor ("CCA") or Certified Professional Agronomist ("CPAg") and by an individual certified by the NRCS as a conservation planner-comprehensive nutrient management plan. The Department's Final Proposed Rule

requires that such a demonstration be made by the development and utilization of an NMP. NMPs are also required by EPA for facilities regulated under the National Pollutant Discharge Elimination System ("NPDES") CAFO regulations. Written Testimony of William Pearson, NMED NOI Attachment 8, p. 66. In addition, in its Final Proposed Rule, the Department has clarified that the templates are adopted by the New Mexico office of the USDA NRCS. Tr. 7, p. 1462. This is based on comments by Commissioner Vigil. DIGCE argues that 3221(K) should allow certification by any one of the listed professionals "based on testimony at the hearing." A review of the transcript reveals no discernible questions about why both CCA and CPAs certifications are required. *See* Tr. 1281 (discussion between Moellenberg and Pearson about CCA vs. CPAg certifications); Tr. 1457 (discussion between Tso and Pearson about requirement for both CCA and CPAg certifications, and potential for disagreement between the two). Overall, Pearson's responses suggest that one or the other certification would be sufficient. Olson's testimony (NMED NOI Ex 8 p.66) does not provide reasons for requiring separate certifications.

92. Subsection O of Section 3221 requires a permittee to protect wells from being contaminated from backflow of wastewater or stormwater by either using an air gap separation or by the installation of a reduced pressure principle backflow prevention assembly. In its initial version of its proposed rule, the Department proposed to allow only the air gap method for assuring there would be no backflow. See, NMED NOI Attachment 8, Pp. 69-70, Section 20.6.2.3221.O. In its June 9 version, in response to concerns raised by DIGCE, the Department modified its language to allow a particular type of backflow prevention device known as a reduced principle backflow prevention assembly. Tr. 5, p. 984. DIGCE recommends inserting "For new dairies" after "Backflow Prevention" so that total disconnect or RP methods apply only

to new dairies. The Hearing Officer notes that NMED could not cite a case of contamination caused by failure of a chemigation valve. Tr. 1233. NMED provided evidence that total disconnect is recommended by national plumbing organizations (NMED Ex. 3221-20 and 3221-21. DIGCE's suggested language would exempt all existing dairies from requirements to update backflow protection to industry standards.

Section 20.6.2.3222 Additional Operational Requirements for Dairy Facilities Discharging To An Evaporative Wastewater Disposal System.

93. The Hearing Officer notes this Section is uncontested.

Section 20.6.2.3223 Ground Water Monitoring Requirements For All Dairy Facilities.

94. Subsection A of Section 3223 requires a Permittee to monitor ground water quality hydrologically downgradient from each source of ground water contamination, including impoundments and fields within land application areas. The monitoring well must be located so as to detect any contamination as soon as possible. DIGCE wants "including but not limited to" language dropped because the only pollution sources identified in the regulations are pondsand land application areas. The Hearing Officer notes that "source of groundwater contamination" is not defined. Therefore, NMED will have carte blanche to define sources not already discussed in the rule. That situation is untenable for the dairies. The Hearing Officer recommends striking "including but not limited to" language.

95. Subparagraphs (a) (b) and (c) of Subparagraph (1) of Subsection A set forth the timelines by which dairies must install monitoring wells. DIGCE recommends adopting 3223(A)(1)(b) language from DIGCE Ex 8 to read: "For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit, provided that NMED may grant an extension of time for good cause shown, such as the lack of availability

of well drillers." This change giving NMED the authority to grant an extension in extenuating circumstances seems innocuous. The Hearing officer recommends accepting DIGCE's added phrase.

96. Subparagraphs (a) (b) and (c) of Subparagraph (2) of Subsection A set forth the timelines by which dairies must install monitoring wells relative to combination impoundments. DIGCE recommends adopting 3223(A)(2)(b) from DIGCE Ex 8 to read "For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit, *provided that NMED may grant an extension of time for good cause shown, such as the lack of availability of well drillers.*" The Hearing Officer believes that giving NMED the authority to grant an extension in extenuating circumstances seems innocuous. Therefore, the Hearing Officer recommends accepting DIGCE's added phrase.

97. At hearing, Commissioner Jones brought up an inconsistency in language between Subparagraph (a) of Paragraph (1) and Subparagraph (a) of the other paragraphs in this subsection. See, Tr. 8, Pp. 1764-1772. The timing for when a new dairy must install a monitoring well under different circumstances needed correction. To correct the timing requirements and resolve the inconsistency, the Department has modified the language in Subparagraph (a) of Paragraph (2), Subparagraphs (a) and (b) of Paragraph (4), and Subparagraph (a) of Paragraph 5 to require a monitoring well for a new dairy *prior to placement of livestock* at the dairy. These changes are made because an impoundment collecting stormwater, and a field to which stormwater can be applied, may begin receiving contaminated water when livestock are introduced to the facility. In comparison, a wastewater impoundment will only begin receiving contaminated water when the dairy is actually discharging from the

milking parlor. See Tr. 8, Pp. 1764-1772. These changes are recommended in the Department's Final Proposed Rule.

98. Subparagraph (3) of Subsection A sets forth the monitoring well requirements for stormwater impoundments. DIGCE proposes adding to the end of 3223(A)(3), "A dairy that has multiple stormwater impoundments constructed and operated in the same manner may use a single monitoring well located downgradient of one impoundment as representative of discharges from the other impoundments.." DIGCE's contention as explained in Ex. 8 is that stormwater is of relatively good quality and is therefore less of a threat to groundwater. DIGCE provided no testimony or evidence that stormwater at a dairy presents a reduced threat to groundwater. In fact, stormwater leaving a cattle pen is likely to be contaminated with feces and urine. Moreover, monitoring only one of several stormwater impoundments eliminates the possibility of detecting leaks from the unmonitored ones. The Hearing Officer recommends denying DIGCE's proposed language.

99. Subparagraphs (a) (b) and (c) of Subparagraph (3) of Subsection A set forth the timelines by which dairies must install monitoring wells relative to stormwater impoundments. DIGCE recommends adopting 3223(A)(3)(b) language from DIGCE Ex 8. With the changes, it would read: "For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit, provided that NMED may grant an extension of time for good cause shown, such as the lack of availability of well drillers." Giving NMED the ability to grant an extension in extenuating circumstances seems innocuous. The Hearing Officer recommends allowing DIGCE's added phrase.

100. Paragraph (4) of Subsection A sets forth the requirement for monitoring wells associated with fields within land application areas. Subparagraph (a) sets forth monitoring well

requirements for fields that use flood irrigation. DIGCE recommends adopting 3223(A)(4)(a) language from DIGCE Ex 8. DIGCE wants a caveat for monitoring groundwater under fields on which flood irrigation has ceased, such that groundwater monitoring is only required if groundwater standards have been exceeded. NMED, in its final draft, has removed the language requiring groundwater monitoring under fields on which flood irrigation has ceased, and seems to have replaced it with the last sentence in the paragraph. DIGCE's reaction to the new language is unknown, but continued groundwater monitoring under former application areas seems prudent.

101. DIGCE recommends adopting 3223(A)(4)(a)(ii) language from DIGCE Ex 8 so that it reads: "For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit, provided that NMED may grant an extension of time for good cause shown, such as the lack of availability of well drillers." Giving NMED the option of granting an extension in extenuating circumstances seems innocuous. The Hearing Officer recommends granting DIGCE's request.

102. Subparagraph (b) of Paragraph (4) of Subsection A sets forth the monitoring well requirements for fields that use sprinkler or drip irrigation. DIGCE recommends adopting 3223(A)(4)(b) language from DIGCE Ex 8. DIGCE wants a caveat for monitoring groundwater under fields on which irrigation has ceased, such that groundwater monitoring is only required if groundwater standards have been exceeded. NMED, in its final draft, has removed the language requiring groundwater monitoring under fields on which flood irrigation has ceased, and seems to have replaced it with the last sentence in the paragraph. DIGCE's reaction to the new language is unknown, but continued groundwater monitoring under former application areas seems prudent.

103. DIGCE recommends adopting 3223(A)(4)(b)(ii) language from DIGCE Ex 8. The provision would read: "For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit, provided that NMED may grant an extension of time for good cause shown, such as the lack of availability of well drillers." Giving NMED the option to grant an extension in extenuating circumstances seems innocuous. The Hearing Officer recommends granting DIGCE's request.

104. Paragraph (5) of Subsection A sets forth the requirement for upgradient monitoring wells associated with sources of contamination. DIGCE recommends adopting 3223(A)(5)(b) language from DIGCE Ex 8 to read: "For an existing dairy facility, monitoring wells shall be installed within 120 days of the effective date of the discharge permit, provided that NMED may grant an extension of time for good cause shown, such as the lack of availability of well drillers. " Giving NMED the option of granting an extension in extenuating circumstances seems innocuous. Hearing Officer recommends granting DIGCE's request.

105. Paragraph (6) of Subsection A of Section 3223 allows the use of existing monitoring wells, and prescribes the requirements for such use. DIGCE recommends adopting 3223(A)(6) language from DIGCE Ex 8 to read: "Use of Existing Monitoring Wells: A monitoring well in existence before the effective date of the dairy rules and was constructed in accordance with Department policies or guidelines in effect at the time of installation shall be approved for ground water monitoring at a dairy facility provided all of the following requirements are met." DIGCE hopes to avoid the requirement for dairies to re-drill monitoring wells to current specifications. NMED intends to be flexible in allowing continued use of existing monitoring wells. *See* NMED Statement of Reasons #256. The Hearing Officer finds that an existing monitoring well, even if constructed to previous NMED specifications, cannot be

accepted if it fails to adequately monitor groundwater quality in accordance with current knowledge about monitoring wells.

106. Paragraph (7) of Subsection A of Section 3223 sets forth exceptions to the monitoring well requirements under certain circumstances. The Final Proposed Rule contains changes in Subparagraph (c) to accommodate the Department's change to Section 3220.Y, which removes the requirement for a test boring well deeper than 75 feet. The change allows an alternative method for determining depth to ground water. DIGCE recommends adopting 3223(A)(7)(c) from Ex. 8. DIGCE claims the 300 foot trigger is not apparent in NMED's evidence or testimony. NMED Statement of Reasons cites Olson testimony in NOI Ex. 8, p. 80. Olson refers to "appreciable depth to groundwater" condition without further citation. "Appreciable depth to groundwater" is a significant condition allowing a waiver, so some trigger depth is needed. Striking the phrase as requested by DIGCE would allow waivers in inappropriate situations.

107. DIGCE proposes adding Section 3223(A)(9) from DIGCE Ex 8, allowing alternative monitoring systems proposed by discharger and approved by NMED (such as vadose zone monitoring). The proposal does not allow alternative monitoring to replace monitoring wells needed to establish groundwater flow direction, and authorizes NMED to require monitoring wells if alternative monitoring indicates impoundment leakage or impacts to groundwater. In NMED Rebuttal Attachment 3 (p. 75), Olson notes that the WQA requires WQCC to develop dairy rules that "monitor water quality". Olson further notes that vadose zone monitoring of any kind, as suggested by DIGCE, by definition monitors the unsaturated zone above groundwater and not the quality of the groundwater underneath. Therefore, the Hearing Officer recommends denial of DIGCE's request.

108. Subsection F of Section 2332 identifies the method to be used to accurately determine the depth-to-ground water in a monitoring well prior to purging and collection of a ground water sample.

109. Paragraph (3) of Subsection F of Section 2332 requires the measurement and recording of pH, specific conductance, and temperature after purging and immediately prior to sample collection. DIGCE recommends striking 2332(F)(3) because field data is not accepted for reporting purposes. In NMED NOI Ex. 8 p. 90, Mr. Olson states that field data must be reported to lend validity to other parameters analyzed in the lab (e.g. nitrate), but provides no scientific citation to confirm his statement.

110. Subsection G of Section 3223 of Section 2332 requires the permittee to collect quarterly ground water samples and have them analyzed for nitrate as nitrogen, total Kjeldahl nitrogen, chloride, sulfate and total dissolved solids, and submit the results to the Department. The Coalition proposes that groundwater analyses should include total water chemistry, total coliform bacteria and E. coli. Rule must allow NMED to require monitoring of other constituents of concern. The Hearing Officer notes that the WQCC Regulations do not include groundwater criteria for total water chemistry, total coliforms or E. coli. However, the WQCC recommended adding E. coli in groundwater monitoring for Parasol Dairy because of the potential for contamination of surface water in nearby Percha Creek by seeping groundwater. It will be difficult to justify generalizing the Parasol Dairy situation to all dairies. Therefore the Hearing Officer recommends denying Coalition's request.

111. Subsection H of Section 3223 requires that the initial ground water samples collected from newly installed monitoring wells at new dairy facilities be collected prior to placing livestock at the facility. In the June 9 version this required collection prior to discharge,

but as discussed in regard to Paragraphs (1) and (2) of Subsection A of this section, Commissioner Jones noted an inconsistency that this change resolves. See, Tr. 8, Pp. 1764-1772.

112. Subsection I of Section 3223 requires that all monitoring wells be surveyed to establish horizontal positioning and top of casing elevations. The language of this subsection requires that newly installed monitoring wells at new dairy facilities be surveyed prior to placement of livestock at the facility. In its June 9 version this required collection prior to discharge, but as discussed in regard to Paragraphs (1) and (2) of Subsection A of this section, Commissioner Jones noted an inconsistency that this change resolves. See, Tr. 8, Pp. 1764-1772. This requirement allows for the establishment of existing ground water flow conditions at the facility prior to any possible influence due to the facility discharge.

113. Subsection J of Section 2332 requires the submittal of a monitoring well completion report after the installation of monitoring wells at a dairy facility to provide all of the pertinent information related to monitoring well installation. The language of this subsection requires that the report be submitted prior to placement of livestock at the facility. In the June 9 version this required submittal of the report prior to discharge, but as discussed in regard to Paragraphs (1) and (2) of Subsection A of this section, Commissioner Jones noted an inconsistency that this change resolves. See, Tr. 8, Pp. 1764-1772.

114. Subsection L of Section 2332 requires the preparation and submittal of quarterly ground water elevation contour maps. DIGCE recommends the adoption of 3223(L) changes from DIGCE Ex 8. Specifically, it seeks to add to end of the paragraph "Upon a showing that ground water elevation contours have been stable over a period of two years of quarterly monitoring, a permittee may, following notice to the department, reduce the preparation and submission of ground water contours to an annual basis. The department may require, by written

notice, resumption of quarterly contour mapping if significant changes in contours are shown." Shuman (NMED NOI Exhibit 8, p. 96) notes that groundwater flow direction can change based on a number of factors and should therefore be monitored frequently. The Hearing Officer has no recommendation to the WQCC regarding DIGCE's request to reduce groundwater flow direction monitoring after two years of stable flow.

Section 20.6.2.3224 Monitoring Requirements For All Dairy Facilities.

115. Section 3224 sets forth the monitoring and reporting requirements for dairy facilities.

116. Subsection B of Section 3224 sets forth the acceptable methods of sampling and analysis. DIGCE recommends deleting the reference to total sulfur analysis consistent with deletions of sulfur testing elsewhere in the regulations. The Hearing Officer notes that the WQCC groundwater regulations have no criterion for total sulfur. Therefore, the Hearing Officer suggests substituting sulfate monitoring requirement consistent with existing criteria in the groundwater regulations at 3103(C).

117. Subsection C of 3224 requires the permittee to measure the volume of all wastewater discharged to wastewater impoundments using a flow meter, and to record the meter readings at intervals not to exceed seven days. The Department originally proposed a frequency of daily readings (NMED NOI Attachment 3) but modified this in its June 9 version and in its Final Proposed Rule based on concerns raised by DIGCE. Tr. 1304-1308. Because this requirement applies to wastewater and combination wastewater/stormwater impoundments, the Department modified the language in its Final Proposed Rule to make clear that it applies to both.

118. DIGCE proposes adoption of the 3224(C) language from DIGCE Ex 8, allowing alternative measuring devices and 180-day averaging. NMED, in their final draft rule, changed daily monitoring requirement to weekly. DIGCE in their Exhibit 8 (p. 81) provided no justification for suggested 180-day averaging for wastewater discharge reporting. The Hearing Officer recommends denial of DIGCE request.

119. Subsection D of Section 3224 requires a permittee to collect stormwater samples from stormwater impoundments quarterly and sets forth the analytes. The Coalition says stormwater must be monitored for conductivity, pH, dissolved oxygen, ammonia nitrogen, total coliform bacteria and E. coli. Sampling and reporting for monitoring wells must be done at least quarterly. Hearing Officer notes WQCC regulations have no criteria for total coliforms or E. coli in groundwater. Therefore, the Hearing Officer recommends denial of the Coalition's request.

120. Subsection F of Section 3224 requires that a permittee who is required to use a double synthetic liner with a leak detection system to monitor and report on the leachates in the system. DIGCE recommends not adopting this section because of the dual liner requirement. Depending upon WQCC decision regarding double liner requirements, Subsection F may stay or go.

Section 20.6.2.3225 Additional Monitoring Requirements For Dairy Facilities With A Land Application Area.

121. Section 3225 sets forth the additional monitoring requirements required of a dairy that uses land application as a treatment system. Subsections A and B require the measurement and reporting of wastewater and stormwater being applied to the land application area using flow meters.

122. DIGCE recommends for Subsection A that the Commission adopt language from Ex. 8 allowing other measuring devices. The Hearing Officer reiterates that one possible approach is to allow "Department-approved" alternative measuring devices/methods.

123. DIGCE recommends for Subsection B adopting language from Ex. 8 allowing other measuring devices. The Hearing Officer reiterates that one possible approach is to allow department approved alternative devices.

124. Subsection C of Section 3225 sets forth the wastewater analytes that must be sampled and reported from a location between the manure solids separator and the impoundment.

125. DIGCE recommends adopt changes to Subsection C from DIGCE Ex. 8. DIGCE argues that total sulfur has no criterion, and the other language is redundant to requirement for sampling as stipulated in the permit. The Hearing Officer recommends substituting sulfate. The other language noted by DIGCE, even if redundant, is within NMED's authority. The Hearing Officer recommends denying DIGCE's request to strike.

126. Subsections K and L of Section 3225 require a permittee to collect composite soil samples from fields within a land application area, and set forth the analytes and procedures for collection. These subsections, taken together, establish the necessary soil sampling to develop, revise and update an effective NMP. DIGCE recommends replacing struck sentence with "An annual soil sampling is not required for a field that has not received wastewater for the preceding or current calendar year, provided that soil sampling shall be conducted before such a field again receives wastewater." In NMED NOI Attachment 8, p. 109, Pearson notes that soil sampling is required to maintain a nutrient management plan for determining wastewater application rates. Continued irrigation of an application field with fresh water, even if no wastewater is applied, will alter the soil nutrient distribution, justifying continued annual sampling.

Section 20.6.2.3226 Additional Monitoring Requirements For Dairy Facilities Discharging To An Evaporative Wastewater Disposal System.

127. Section 3226 requires semi-annual sampling and reporting of wastewater in evaporative impoundments. DIGCE recommends incorporating the changes in Ex: 8 striking sulfur testing, change sampling frequency to annual and require reporting in quarter following the sample event. Sampling in evaporation ponds is needed to compare with groundwater monitoring results to detect pond leakage and potential groundwater contamination (Written Testimony of William C. Olson, NMED NOI Attachment 8, p. 111.). NMED backed off from quarterly to semiannual. The Hearing Officer recommends adopting NMED's language. The WQCC regulations have no criterion for total sulfur in groundwater. The Hearing Officer suggests substituting sulfate for which a criterion does exist in 3103(C).

Section 20.6.2.3227 Contingency Requirements For All Dairy Facilities.

128. Section 3227 sets forth the actions a dairy must take if certain conditions occur, including exceedances of ground water standards at a monitoring well. This section was revised in the Department's Rebuttal Attachment 3, submitted March 29, 2010, (See, Written Testimony of George Schuman, NMED Rebuttal Attachment 3, Pp. 98- 100), again in its June 9 version (See, Tr. 5, p. 986), and also in its Final Proposed Rule, all in response to issues raised by DIGCE. See, Tr. 8, Pp. 1721-1724. In addition, in its Final Proposed Rule, the Department proposes to change the time periods for approval of corrective action plans and submission of revised corrective action plans from 30 days to 60 days. The proposed rule also changes the requirement that repairs to liners be completed within 180 days to within 240 days. These

proposed changes were requested by the Department and agreed to by DIGCE in a post-hearing telephone call between counsel. The Coalition neither supports nor opposes the changes.

129. Subsection A of Section 3227 applies to a situation where exceedances occur in a monitoring well other than one intended to monitor an impoundment. It requires that specific actions be taken if any two ground water samples from the monitoring well show exceedances of both WQCC ground water standards and contaminant concentrations in the upgradient monitoring well. The upgradient and downgradient samples must be taken within 2 days of each other. If ground water quality data from an upgradient well is not submitted, the standards of 20.6.2.3103 are applicable. Specifically, the permittee must either submit a corrective action plan within 120 days after the second exceedance, or submit a petition for variance and demonstrate to the Commission that the source of the contamination is not the source monitored by the well. The permittee may be required to submit an abatement plan proposal pursuant to 20.6.2.4106 within 60 days after notice by the Department. In addition, in its Final Proposed Rule, the Department proposes to change the time periods for approval of corrective action plans and submission of revised corrective action plans from 30 days to 60 days. The proposed rule also changes the requirement that repairs to liners be completed within 180 days to within 240 days. These proposed time period changes were requested by the Department and agreed to by DIGCE in a post-hearing telephone call between counsel. The Coalition neither supports nor opposes these proposed changes. In its Final Proposed Rule, the Department also added a provision that will "reset" the contingencies in this subsection once the requirements of the subsection have been complied with and ground water monitoring shows no exceedances for 8 consecutive quarters, and the total nitrogen concentration in ground water is less than or equal to

10 mg/L. This change is based on a discussion at hearing between DIGCE and Mr. Schuman, suggesting that such a provision is needed. Tr. 8, p. 1723.

130. The Coalition recommends that under Section 3227, discharge permits must be sufficiently restrictive of the mass loading of contaminants to groundwater. The Hearing Officer notes that the Coalition offered no alternative language to accomplish their objective.

131. DIGCE recommends removing the two-day sampling requirement from 3227(A) because there is no connection with groundwater travel. Shuman confirmed that there was no consideration given to groundwater flow when the two day sample separation requirement was drafted. *See* Tr. 1735. The Hearing Officer recommends granting DIGCE's requested change.

132. Subsection B of Section 3227 applies to exceedances at monitoring wells associated with impoundments. DIGCE recommends removing two-day sampling requirement from 3227(B) because there is no connection with groundwater travel. Shuman agreed that two-day sample separation requirement had no linkage to groundwater travel time. *See* Tr. 1735. The Hearing Officer recommends granting DIGCE's request to strike sentence.

133. Subsection D of Section 3227 provides specificity to the permittee of the actions to be taken when encountering exceedances of the permitted maximum daily discharge volume, based on the actual measured volume of wastewater discharged to an impoundment (see Subsection O of Section 20.6.2.3220 NMAC). DIGCE recommends adopting changes to this Subsection from its Ex. 8 including 180-day averaging, adding condition that required freeboard has not been maintained. DIGCE's suggestion is based on proposed change in definition in "maximum daily discharge." In its closing argument, DIGCE states that its issue with the definition has been resolved by NMED's final draft. No other justification for the 180-day averaging or maintenance of freeboard is offered in DIGCE Ex. 8 (p. 93).

134. Subsection E of Section 3227 requires corrective action when an impoundment is not capable of meeting the required capacities. DIGCE recommends adopting changes to 3227(E) in DIGCE Ex 8, including reducing "average daily" discharge volume, and striking advanced treatment system. DIGCE Exibit 8 p. 97 addresses inadequacy of advanced treatment systems for dairy waste. There is no discussion of advanced treatment systems in the hearing transcript. In DIGCE Exhibit 8, no evidence is provided for the statement that "advanced treatment systems have proven infeasible for dairies" (p. 97). The Hearing Officer recommends denying DIGCE's request.

135. Subsection F of Section 3227 states that if a minimum of two feet of freeboard cannot be maintained at an impoundment, a corrective action plan must be submitted to the Department. DIGCE adopt language from Ex. 8 including reducing "average daily" discharge volume and striking advanced water treatment system. There is no discussion of advanced treatment systems in the hearing transcript. In DIGCE Exhibit 8, no evidence is provided for the statement that "advanced treatment systems have proven infeasible for dairies" (p. 97). The Hearing Officer recommends denying DIGCE's request.

136. Subsection H of Section 3227 sets forth contingencies if a primary liner leaks in a double lined impoundment. DIGCE recommends not adopting 3227(H) because it pertains to double liners, the requirements for which it wants deleted elsewhere. Depending on the WQCC's decision about requiring double liners, Subsection H may stay or go.

137. Subsection I of Section 3227 sets forth the actions that must be taken in the event of a spill or unauthorized release. This subsection is necessary to direct the permittees to Section 20.6.2.1203 NMAC for addressing unauthorized discharges in a general sense, while providing specificity in the form of immediate corrective actions that need to occur at a dairy facility for

these types of events. For those facilities with a permitted land application area, wastewater or stormwater from unauthorized discharges may be applied only to the permitted land application area and documented (for the purpose of nutrient management) in accordance with the dairy rule. Written Testimony of William C. Olson, NMED Rebuttal Attachment 3, p. 118.

Section 20.6.2.3228 Additional Contingency Requirements For Dairy Facilities With A Land Application Area [Reserved].

138. Section 3228 was deleted by the Department in its June 9 version and in its Final Proposed Rule. DIGCE recommends not adopting it since it is "Reserved."

Section 20.6.2.3229 Additional Contingency Requirements For Dairy Facilities Discharging To An Evaporative Wastewater Disposal System.

139. This section requires a permittee who discharges to an evaporative wastewater impoundment to submit a corrective action plan if he cannot maintain two feet of freeboard at the impoundment, within two weeks of the discovery. DIGCE recommends striking the language "or installing an advanced treatment system" because it thinks they are not feasible for dairies. The Hearing Officer disagrees for the reasons stated earlier in this Report.

Section 20.6.2.3230 Closure Requirements For All Dairy Facilities.

140. Subsection A of Section 3230 sets forth the actions a dairy must take for closure of an impoundment or the facility. Paragraph (1) sets forth the required actions for permanent closure of the facility, including notification of the Department, installation of monitoring wells and emptying of impoundments. DIGCE recommends striking the last sentence of paragraph (1), subparagraph (e). The Hearing Officer notes that there is no discussion in the hearing

transcript of potential threats to groundwater from disposal of manure solids on application fields. DIGCE provides no scientific backing for the opinion expressed in DIGCE Exhibit 8 (p. 98) that manure solids disposal poses no threat to groundwater. In fact, manure solids contain nutrients that can leach to groundwater. Olson (NMED Exhibit 8 p. 121) states that removal and disposal of remaining manure solids must be addressed, without providing specific reasons. The Hearing Officer recommends denial of DIGCE's requested change.

141. Paragraph (2) of Subsection A sets forth the requirements for closure of an impoundment. DIGCE recommends striking subparagraph (b) as described in DIGCE Ex 8. DIGCE Exhibit 8 p. 98 states: "manure solids have been applied to agricultural fields from various sources for years, and there is no need to regulate disposal of manure solids under these dairy rules. We are not aware of any evidence that application of manure solids consistent with good agricultural practices poses any threat to ground water." There is no discussion in the hearing transcript of potential threats to groundwater from disposal of manure solids on application fields. DIGCE provides no scientific backing for the opinion expressed in DIGCE Exhibit 8 (p. 98) that manure solids disposal poses no threat to groundwater. In fact, manure solids contain nutrients that can leach to groundwater. Olson (NMED Exhibit 8 p. 121) states that removal and disposal of remaining manure solids must be addressed, without providing specific reasons. The Hearing Officer recommends denial of DIGCE's requested change.

Section 20.6.2.3233 Record Retention Requirements For All Dairy Facilities.

142. Section 3233 is uncontested.

Section 20.6.2.3234 Transfer of Dairy Discharge Permits.

143. Section 3234 is uncontested.

Section 20.6.2.3235 Continuing Effect of Prior Actions During Transition.

144. At hearing, Commissioner Jones noted a concern that if an existing permit contains a provision that a renewal be submitted 120 days prior to expiration, whether that would be superceded by the new rule. Tr. 7, Pp. 1564 - 1565. In its Final Proposed Rule, the Department added language to Subsection A making clear that if an existing permit contains a condition that the permit renewal application must be submitted 120 days prior to the expiration date, that would supercede the one-year requirement of Subsection A of Section 3205 for a period of two years after these rules are effective.

IT IS SO RECOMMENDED:

SUBMITTED this 7th day of October, 2010.

Steve Glass, Hearing Officer
C/O Water Quality Control Commission
Harold Runnels Bldg., Rm. N-2153
1190 St. Francis Drive
Santa Fe, New Mexico 87505
(505) 827-2425
(505) 827-2836 FAX